

The Lifecycle of a Reporting Services Report

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1/29/2014



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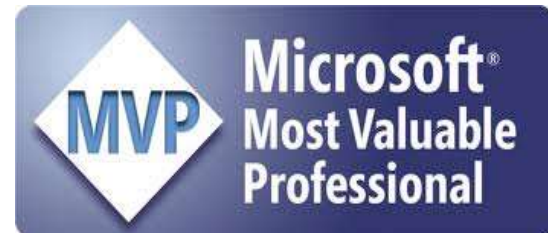
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Agenda

The Lifecycle of a Reporting Services Report

Requirements & Templates



Development Standardization & Centralization



Testing & Documentation



Report Delivery



Deployment



Troubleshooting



Maintenance & Administration

Out of scope:

- SSRS Power View for SharePoint
- Report Builder

REQUIREMENTS & TEMPLATES

What do we need before beginning report development?

Requirements Document

Report Requirements

Contents

Report Requirements.....	1
A. Change History.....	1
B. Overview of Business Needs.....	1
C. Sample Report / Mockup / Prototype.....	2
D. Data Sources.....	2
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F. Parameters.....	3
G. Report Body.....	4
H. Grouping.....	
I. Sorting.....	
J. Interactive Features.....	
K. Formatting & Display.....	
L. Exceptions to Typical Report-Based Security.....	
M. Exceptions, Notes or Special Situations.....	

Sample Report Requirements
template from sqlchick.com.
Feel free to use, edit & change
for your specific requirements.



Download a
Report Requirements
template

<http://www.sqlchick.com/presentations/>

Goals:

- Capture individual report needs before development starts

Report Style Guide

Report Style Guide

Sample Report Style Guide from
sqlchick.com.
Feel free to use, edit & change for
your specific requirements.

Contents

Report Style Guide.....	1
A. Purpose and Audience.....	1
B. Change History	1
C. General Properties.....	1
D. Naming Conventions	2
E. Numeric Formatting, Rounding, and Scaling	2
F. Header	3
G. Footer	
H. Tables	
I. KPI Colors and Icons	
J. Interactivity	

A. Purpose and Audience

The purpose of this Report Style Guide is to standardize the look and feel



Download a
Report Style Guide
template

<http://www.sqlchick.com/presentations/>

Goals:

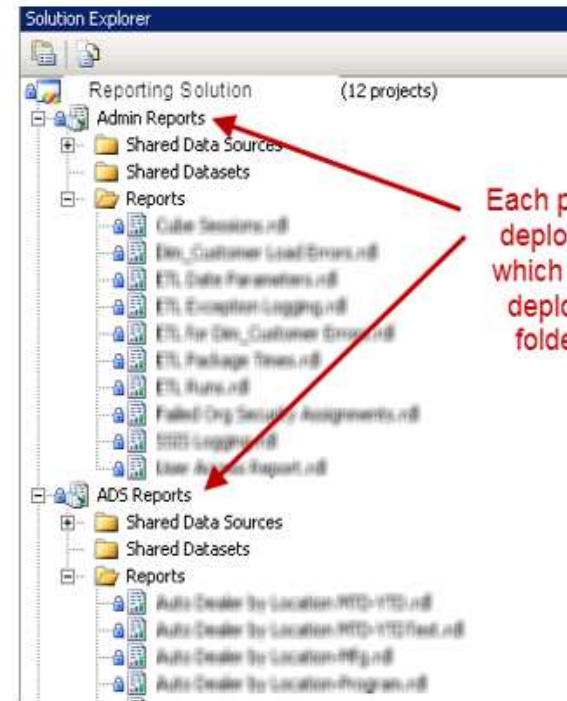
- Capture standard report settings
- Provide a consistent user experience
- Make report development more efficient

Solutions, Projects, & Source Control

- ✓ SSRS Project in SQL Server Data Tools
- ✓ Projects in SSDT or BIDS should be organized the same way reports are delivered.

Goals:

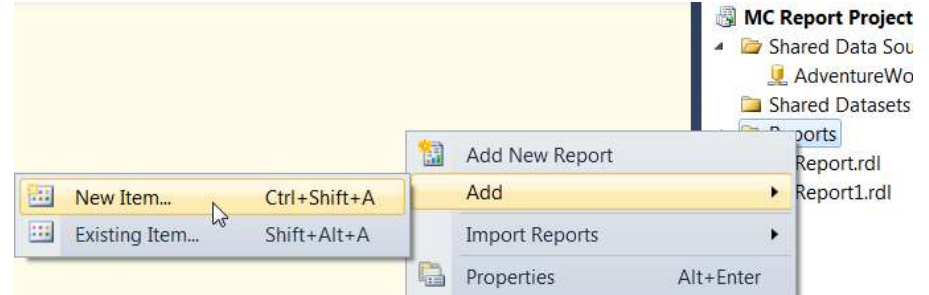
- One project per destination folder or library
 - Don't get in habit of "togglng" deployment properties (this introduces risk & confusion)
- ✓ Multiple projects may reside under one solution
 - ✓ Preferably all files are under source control (such as TFS)



Each project has its own deployment properties which offers flexibility in deploying to different folders or document libraries

Custom Report Template

- ✓ Custom report template can be used as a “starter report” with consistent header, footer, titles, logo, colors, fonts, etc.
- ✓ Template should align to the Report Style Guide.
- ✓ Add as many RDL files as you’d like to the \ReportProject location (on each machine). Different RDL names can use different formats (ex: if individual divisions or schools use different color palettes & formatting).

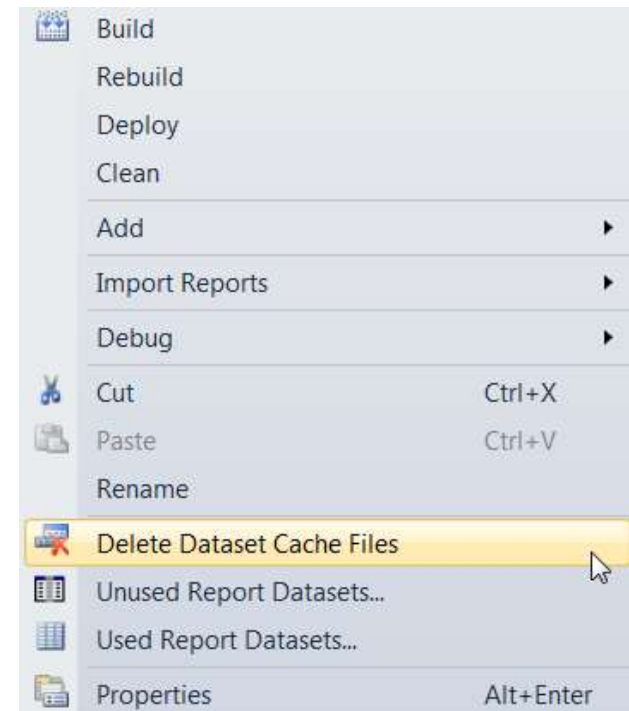


```
C:\Program Files (x86)\Microsoft Visual Studio  
10.0\Common7\IDE\PrivateAssemblies\ProjectItems\  
ReportProject
```


BIDS Helper

- ✓ Delete Dataset Cache Files
Deletes the *.data files stored locally to force refresh of data.
- ✓ Unused Report Datasets
Locates unused datasets to delete. Don't forget all datasets execute whether they are used or not! ★
- ✓ SmartDiff
Compares differences in XML files. Requires TFS.

(There's other BIDS Helper features as well for SSIS and SSAS.)



Download
BIDS Helper
from

<http://bidshelper.codeplex.com>

Analysis Services Stored Procedure Project

- ✓ Several functions which facilitate reporting, such as:
 - String Filters – LIKE (useful for wildcard searches in SSRS parameters)
 - StrToSet – passes shorter names (useful if running into URL limitations)



Download
SSAS Stored
Procedure Project
from

<http://asstoredprocedures.codeplex.com/>

DEVELOPMENT STANDARDIZATION & CENTRALIZATION

Making conscious report development choices

Datasets

Standards for data access in your organization?

Stored Procedure

- ✓ Reuse query plan
- ✓ Reuse across reports
- ✓ DBMS security
- ✓ DBA visibility
- ✓ Abstraction layer
- ✓ Deployment & testing

Views

- ✓ No reuse of query plan
- ✓ Limitations (ex: variables)

Embedded in Report

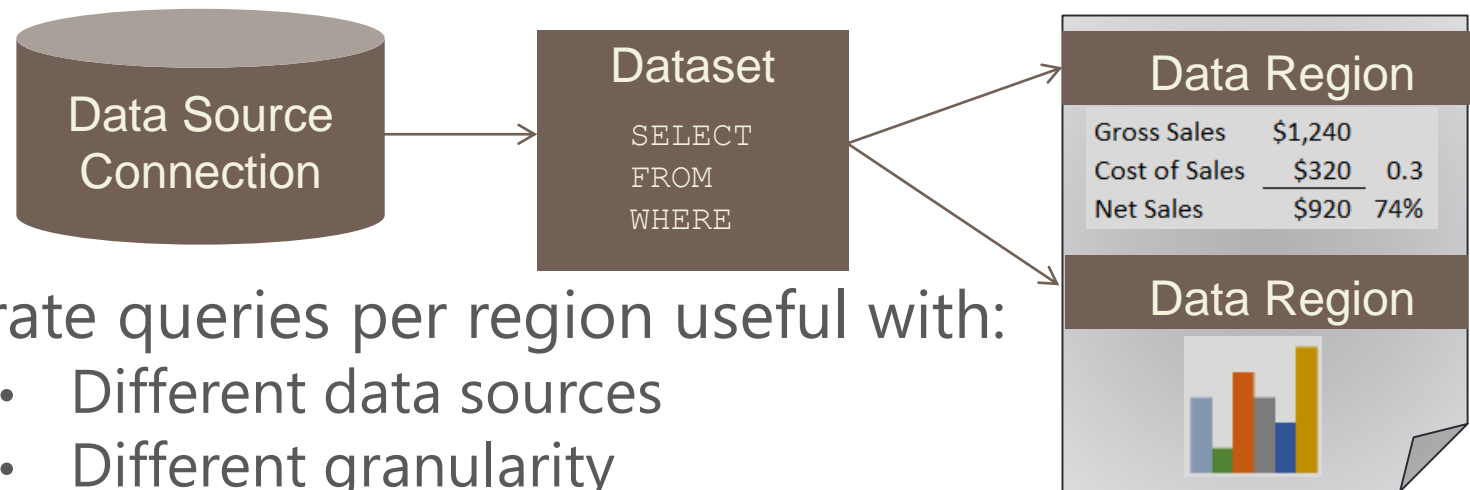
- ✓ Easy; simpler deployment
- ✓ Limited formatting
- ✓ No comments

Considerations

- ✓ Pros/cons of each
- ✓ Separation of duties
- ✓ Source system (SSAS vs SQLSvr)
- ✓ Use of shared datasets
- ✓ Same approach per project

Datasets

One dataset per data region?
Or one dataset shared among data regions?



- ✓ Separate queries per region useful with:
 - Different data sources
 - Different granularity
- ✓ One query shared across regions useful with:
 - Data region filters
 - Different data regions (ex: tablix & chart)
- ✓ Which renders faster? Easier to maintain?
- ✓ Verify all datasets are used. If present, it executes.

Centralization

Facilitating Centralization & Reuse

- ✓ **Shared Data Sources** Caution: data source embedded in report is default within the dialog box
- ✓ **Shared Datasets** Reusable queries – great for commonly used data queries & parameter value queries such as Dates & Geography
- ✓ **Report Parts** Charts & tables reusable within Report Builder
- ✓ **Images** Store in DB, or SSRS Project, or as a Report Part instead of embedded in report
- ✓ **Store logic & calculations at lowest possible level**
Source System vs. BI ETL vs. Cube vs. Report

Derived Fields & Calculations

Derive field within dataset query?
Or textbox expression?
Or in underlying data source?

- ✓ **Centralization of logic**
- ✓ **Maintainability** (who will maintain it going forward?)
- ✓ **Reuse** (is the calculation report-specific or general use?)
- ✓ **Performance implications** (ex: SSAS formula engine cache or SQL Server cache)
- ✓ **Parameterization** (is a report parameter part of calc?)

Parameters

Query-driven list?
Or static list of values?

- ✓ Will list of possible values ever change?
- ✓ Is list of values very long?
- ✓ List of possible values should only show values with data (ex: NonEmpty)

Default value?
Or no default?

- ✓ Should user respond to parameter before the report executes?
- ✓ Is there a default value common for most users?
- ✓ Does report execute extremely quickly?
- ✓ Consider a "DateDefaults" shared dataset

Expressions & Variables

Derive in Expression?
Or within Group Variable?
Or within Report Variable?

- ✓ Scope of the logic & when it's evaluated
 - Expression: once per page (no caching)
 - Group Variable: once per unique group (caching)
 - Report Variable: once per report (caching)
- ✓ Reusability
 - Expression: applicable to one textbox
 - Group Variable: applicable to 1 group & children
 - Report Variable: applicable throughout report

Filtering

Query filtering (the “where” statement)?
Or report filtering (dataset, data region, group)?

- ✓ Typically, query filtering (in dataset) is most efficient
- ✓ Report filtering is useful when:
 - One dataset is shared with **multiple data regions**
 - You are **unable to modify** the original stored procedure or shared dataset
 - Data source doesn't support **query parameters**
 - Report is being rendered from a **snapshot**

Custom Code

Derive in Expressions? Or within Report Code?
Or External Assembly?

- ✓ Who will maintain report going forward? (VB.NET skills)
- ✓ External assembly must be deployed
- ✓ Scope of custom code:
 - One textbox (expression)
 - One report (custom code)
 - Many reports (external assembly)

TESTING & DOCUMENTATION

Ideas for being efficient, consistent, and thorough

Reporting Documentation

Documentation Goals: Standardization, Efficiency, Understanding

- ✓ For overall reporting project
 - Report design guide
 - Inventory of reports
 - User guides, tutorials, FAQ, help
- ✓ For individual reports
 - Requirements (not usually updated over time)
 - Report definition (only useful if updated over time)
 - Testing results (to reproduce tests if needed)


User FAQs & Help

Making FAQs & Info Readily Accessible

- ✓ Consider using an SSRS report as a drill-through report for FAQs, KPI definitions, fiscal calendar reference, or other information useful for report consumers
- ✓ Consider providing an email address or phone # for questions on report (especially if an external customer-facing report)
- ✓ Consistent placement across reports (ex: top right, or footer)

Testing

- ✓ Unit Testing
 - Is report really “done”
 - Check “the little things” that increase user satisfaction
 - Predecessor to UAT
- ✓ Regression Testing
 - Same results as before changes
- ✓ User Acceptance Testing
 - Data accuracy
 - Presentation of information
 - Interactive behavior



Report Unit Testing Checklist

Pass	Test Item
<input type="checkbox"/>	Data accuracy
<input type="checkbox"/>	Security (Impersonation of data level security)
<input type="checkbox"/>	Parameters (all parameter combinations & choices)
<input type="checkbox"/>	Interactive user experience: <ul style="list-style-type: none">Drill-down (+/- toggles to show/hide data on page)Drill-through (hyperlinks to different report(s))Repeating column headings on all pagesFreezing column headings on scroll downPage breaks in appropriate spotsInteractive sorting
<input type="checkbox"/>	Printing



Download a
Unit Testing Checklist
from

<http://www.sqlchick.com/presentations/>

REPORT DELIVERY

Making the most of the report delivery environment

Modes for Storing & Managing Reports

SharePoint Mode (Integrated Mode)

- ✓ SharePoint serves as a single access point for BI portal
- ✓ Additional metadata fields may be created
- ✓ Unified security model
- ✓ Checkouts
- ✓ Workflow & approvals
- ✓ Versioning & history
- ✓ Additional ULS logging
- ✓ Unsupported: Linked reports

Native Mode (Report Manager)

- ✓ Report Manager is much like a file system folder structure
- ✓ Simpler than SharePoint mode, but offers much less flexibility than document libraries
- ✓ Not customizable
- ✓ Separate security model
- ✓ No checkouts, workflow, versioning
- ✓ Unsupported: Data Alerts & Power View

Delivery Mode

(1 of 3)

Using SharePoint for Report Delivery



Welcome to the BI Center

Data Source	Last Refreshed	
Finance	5/3/13 4:33 AM	●
Sales	5/3/13 5:45 AM	●
Marketing	5/2/13 9:50 PM	●

Easy to find
Documentation
& Help

Sales Reports

Type	Name	Report Status	Modified	Report Description	Owner
	Auto Sales By City NEW	Final	12/31/2012 2:05 PM	Summarizes sales per city	Melissa Coates
	Auto Sales Summary By Year NEW	Preliminary	12/31/2012 3:28 PM	Breakdown by city, by year, and by gender	Melissa Coates

Announcements, News, and Updates

Title
New Marketing Analytics Model Available - See Joan Brown with questions
Year-End Closing Will Run On 1/5/2013

[Add new announcement](#)

Training Documentation

Type	Name
	Data Dictionary - Finance
	Data Dictionary - Sales
	PowerPivot FAQs
	PowerPivot Training Guide
	Report Builder FAQs
	Report Builder Training Guide

[Add document](#)

Data Connections

Type	Name
	Tailspin Toys Database NEW
	AutoSalesPowerPivotMo

[Add new item](#)

Links

Self-Service BI Gallery
Contoso Dashboards

[Add new link](#)

Help

Check out our [Frequently Asked Questions](#) page.

Review the [Help and Training](#) page.

Contact the Help Desk at 902-123-4567 or at helpdesk@biteam.com.

The Help Desk can accept questions and requests for:

- Permission & security issues
- New reports or changes to existing reports
- New data fields or calculations
- Using Excel, PowerPivot, or Report Builder

Make access to
Reports and
Data
Connections
readily available

Keep users
informed with
Announcements

Delivery Mode

(2 of 3)

Using SharePoint for Report Delivery

The screenshot shows a SharePoint library interface for 'Sales Reports'. The breadcrumb path is 'SQL Image 2012 > Sales Reports > Current reports'. The library contains two report files:

Type	Name	Report Status	Modified	Report Description	Owner
Report	Auto Sales By City <small>NEW</small>	Final	12/31/2012 2:05 PM	Summarizes sales per city	Melissa Coates
Report	Auto Sales Summary By Year <small>NEW</small>	Preliminary	12/31/2012 3:28 PM	Breakdown by city, by year, and by gender	Melissa Coates

The context menu for the 'Auto Sales Summary By Year' report is open, showing options like 'View Properties', 'Edit Properties', 'Edit in Report Builder', 'Check Out', 'Publish a Major Version', 'Manage Data Alerts', 'Manage Subscriptions', 'Manage Data Sources', 'Manage Shared Datasets', and 'Manage Parameters'.

Four callout boxes provide design recommendations:

- Structure libraries by security needs, subject, user base, and/or report type** (points to the 'Sales Reports' library in the left navigation pane).
- Consider requiring approvals (workflow) & check-outs** (points to the 'Check Out' option in the context menu).
- Create custom metadata fields to help users; can be used with Search** (points to the 'Report Description' column in the table).
- Consider using versioning (esp. user reports w/out source control)** (points to the 'Auto Sales Summary By Year' report file).

Delivery Mode

(3 of 3)

Using Report Manager for Delivery

Structure folders by security needs, subject, user base, and/or report type

Add helpful info to the Description (such as Purpose or Contact Name)

Limitations of Native Mode:
Separate security model
Not customizable
No versioning
No workflow

The screenshot displays the SQL Server Reporting Services (SSRS) web interface. At the top, the navigation bar includes links for Home, My Subscriptions, Site Settings, and Help. The main content area shows a folder structure under 'SQL Server Reporting Services Home'. The folders are organized into a hierarchy: 'Data Sources' (containing 'Finance Report Parts'), 'IT Reports' (containing 'Marketing Report Parts'), and 'Sales Report Parts' (containing 'Sales Reports'). A search box is located in the top right corner. Below the folder view, a context menu is open for the 'Auto Sales By City' report, listing actions such as Move, Delete, Subscribe..., Create Linked Report..., View Report History, Security, Manage, Download..., and Edit in Report Builder. The interface also features a toolbar with options like 'New Folder', 'New Data Source', 'Report Builder', 'Folder Settings', and 'Upload File'.

DEPLOYMENT

Gaining efficiency while minimizing the chance for errors

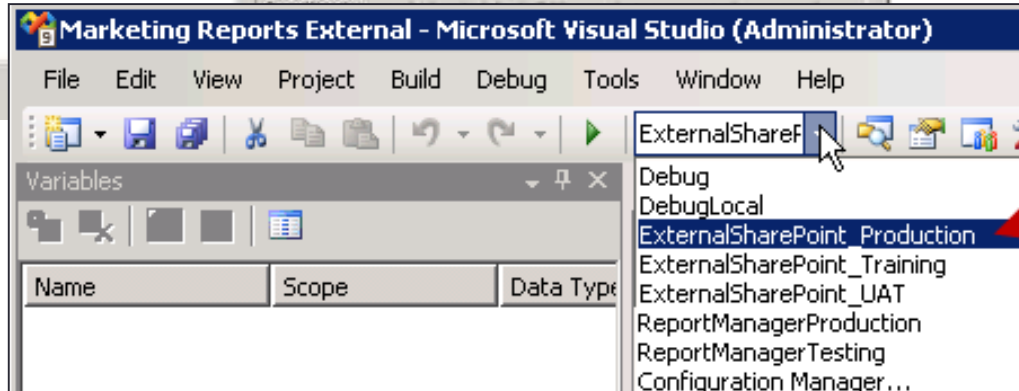
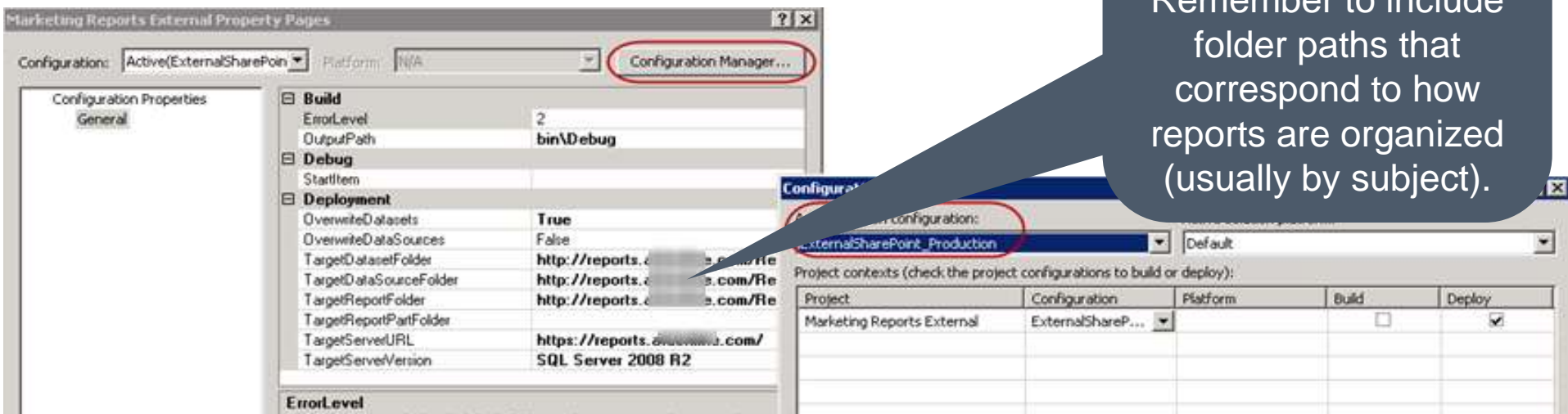
SSRS Deployment Options

Deployment Approach	Useful for Development & Test	Useful for QA & Production
Deploy from SSDT or BIDS	Yes – Most straightforward method to publish	Depends – Some organizations allow this, but in situations where developers do not have Prod rights or need to hand off deployments to operations, this usually isn't ideal
Upload to SharePoint or Report Manager	Depends – This works fine for deploying a small number of reports; quickly becomes tedious for a large number of reports	Depends – This works fine for deploying a small number of reports; quickly becomes tedious for a large number of reports
MSBuild	Depends – If team is doing frequent builds	Yes – Very useful to hand off to an admin or operations folks
RS.exe	Not typically used for Dev & Test	Yes – Very useful to hand off to an admin or operations folks
Save As from Report Builder	N/A - Typically for use by self-service BI users	N/A - Typically for use by self-service BI users

Deployments from SSDT or BIDS (1 of 2)

If you need to deploy to various locations out of SSDT or BIDS, use configurations.

Default name is same as project – might need to alter slightly. Remember to include folder paths that correspond to how reports are organized (usually by subject).



Multiple configuration options exist to facilitate deployment of same report to > 1 destination (ex: Report Manager and SharePoint). Can also be used for Dev>Test>Prod.

Deployments from SSDT or BIDS (2 of 2)

- ✓ TargetServerVersion controls feature compatibility
- ✓ ErrorLevel controls error/warning flexibility:

0 = Severe errors
(No preview)

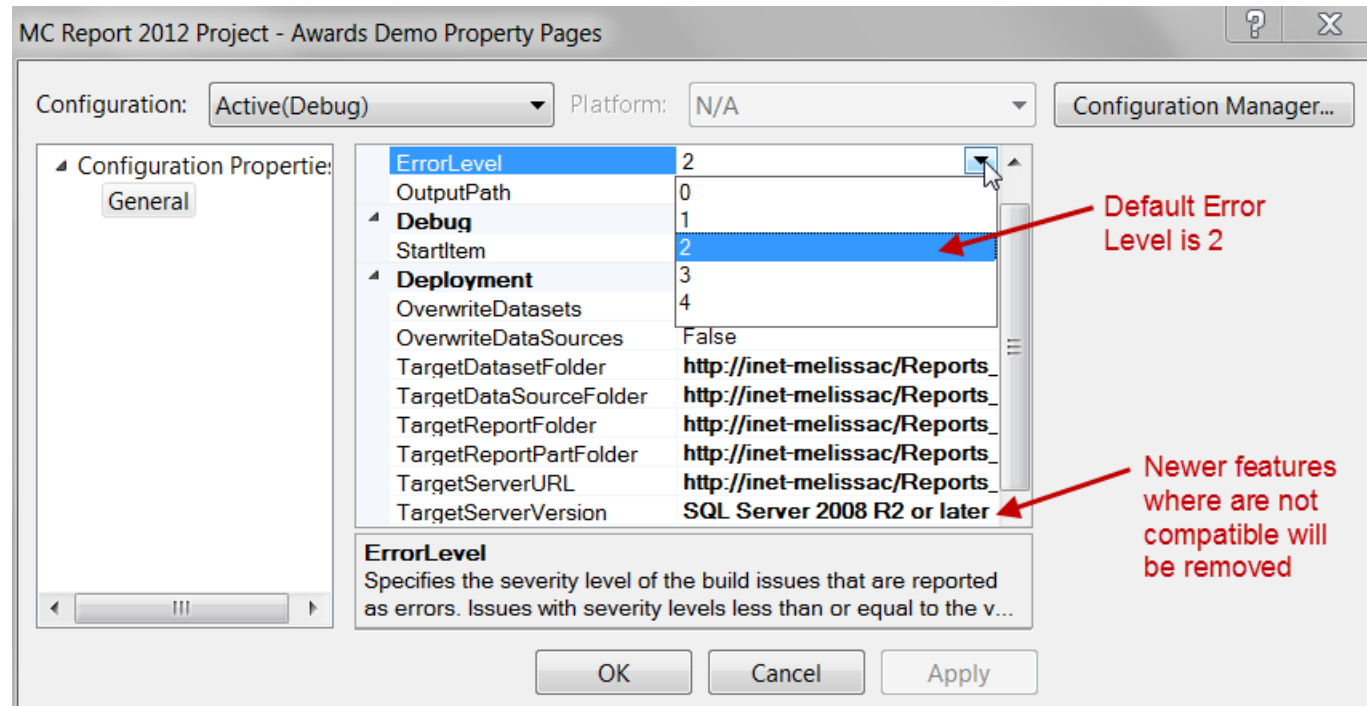
1 = Severe errors

2 = Less severe

3 = Minor errors

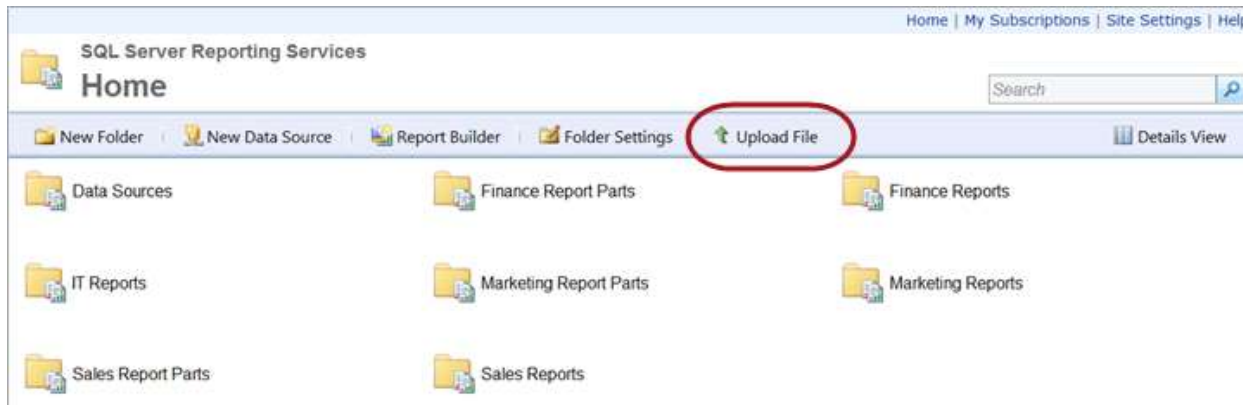
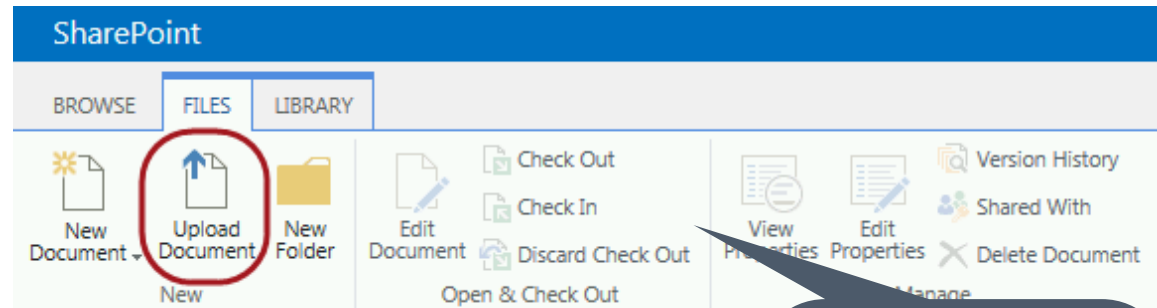
4 = Warnings

If you have an error
 \leq the ErrorLevel
setting, it will be
considered a
warning.



Deployments via Upload Process

- ✓ Simple to do in SharePoint or Report Manager – just need to start in the correct library or folder
- ✓ Tedious if more than a handful of reports to deploy
- ✓ May need to manually “bind” report to data sources or shared datasets

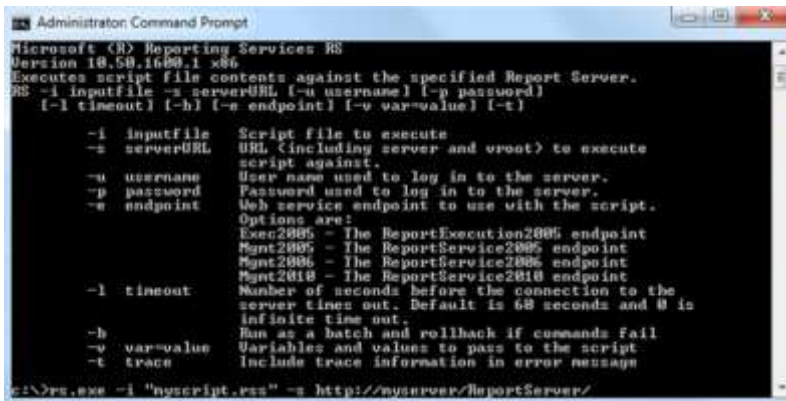


Tip – when deploying to SharePoint, be sure to publish a “major version” to avoid users getting errors

Deployment Utilities

RS.Exe

- ✓ RS.exe is a deployment utility which uses a VB.NET script file as input (the .rss file)
- ✓ Can deploy a set of reports & data sources (which is an advantage over SSDT or BIDS which can deploy the entire project or one report)
- ✓ CodePlex project no longer available



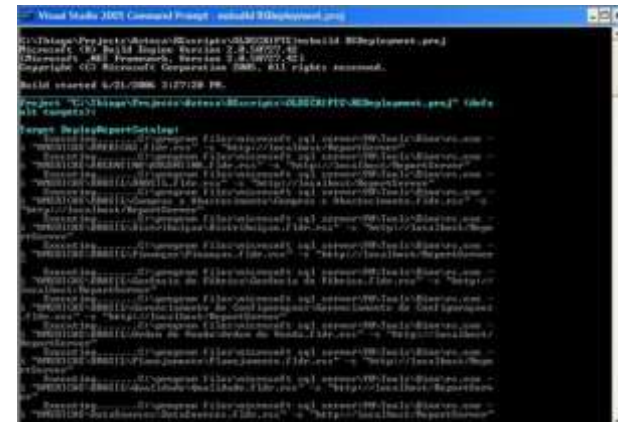
```
Administrator Command Prompt
Microsoft (R) Reporting Services RS
Version 10.50.1600.1 x86
Executes script file contents against the specified Report Server.
RS -i inputfile -s serverURL [-u username] [-p password]
      [-l timeout] [-h] [-e endpoint] [-v var=value] [-t]

    -i inputfile      Script file to execute
    -s serverURL      URL (including server and root) to execute
                      script against.
    -u username       User name used to log in to the server.
    -p password       Password used to log in to the server.
    -e endpoint       Web service endpoint to use with the script.
Options are:
    Exec2005 - The ReportExecution2005 endpoint
    Mgmt2005 - The ReportService2005 endpoint
    Mgmt2006 - The ReportService2006 endpoint
    Mgmt2010 - The ReportService2010 endpoint
    -l timeout        Number of seconds before the connection to the
                      server times out. Default is 60 seconds and 0 is
                      infinite time out.
    -h               Run as a batch and rollback if commands fail
    -v var=value     Variables and values to pass to the script
    -t trace         Include trace information in error message

C:\>rs.exe -i "myscript.rss" -s http://myserver/ReportServer/
```

MSBuild

- ✓ MSBuild is what powers building of projects in Visual Studio; based on the .NET framework
- ✓ Useful to automate builds, such as whenever someone checks in new code, or to use the command line to automate tasks
- ✓ C# CodePlex project: <http://ssrmsbuildtasks.codeplex.com/>



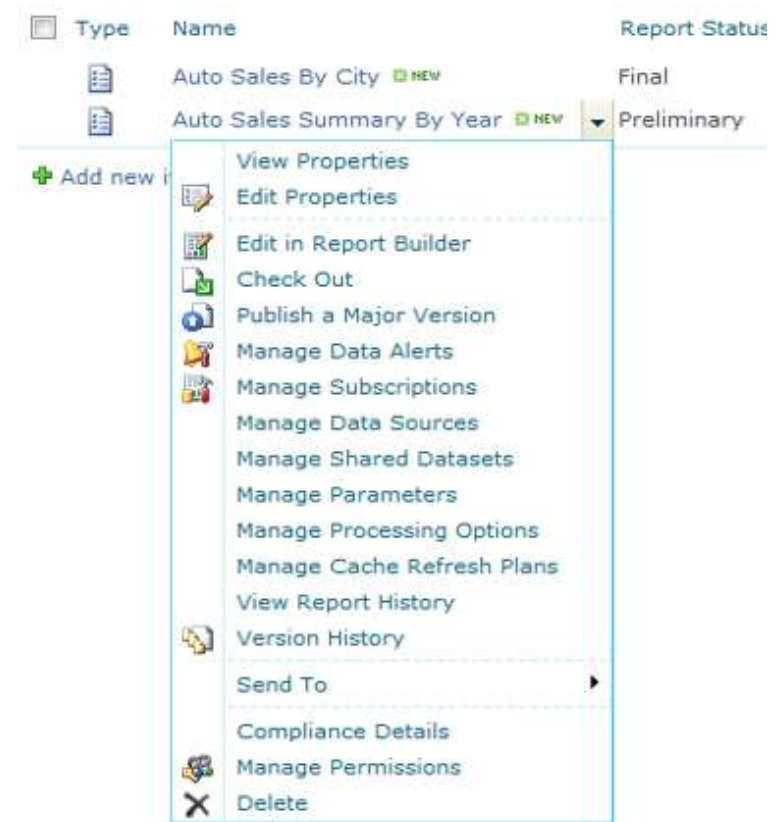
```
Visual Studio 2005 Command Prompt - vsbuild SSDeployment.proj
C:\Temp\Project\obj\Debug\SSDeployment\SSDeployment.proj
Microsoft (R) Build Engine Version 2.0.50727.40
Copyright (C) Microsoft Corporation. All rights reserved.

Build started 6/21/2006 12:27:28 PM.

Project "C:\Temp\Project\obj\Debug\SSDeployment\SSDeployment.proj" (0) on
  (0) target(s):
  Target "DeployReportCatalog"
    Microsoft (R) Reporting Services RS
    Version 10.50.1600.1 x86
    Executes script file contents against the specified Report Server.
    RS -i inputfile -s serverURL [-u username] [-p password]
      [-l timeout] [-h] [-e endpoint] [-v var=value] [-t]
    Options are:
    Exec2005 - The ReportExecution2005 endpoint
    Mgmt2005 - The ReportService2005 endpoint
    Mgmt2006 - The ReportService2006 endpoint
    Mgmt2010 - The ReportService2010 endpoint
    -l timeout        Number of seconds before the connection to the
                      server times out. Default is 60 seconds and 0 is
                      infinite time out.
    -h               Run as a batch and rollback if commands fail
    -v var=value     Variables and values to pass to the script
    -t trace         Include trace information in error message
    ...
```

When a Deployment Doesn't Deploy

- ✓ When you "Manage" a report in Report Manager or SharePoint, certain properties are not part of the report definition (RDL file).
Ex: parameter defaults.
- ✓ If you redeploy a report from SSDT, the parameter defaults that were changed in the interface will not get overwritten unless the report is deleted first. This separates out administration from development.



TROUBLESHOOTING

Tackling slow reports

Troubleshooting Slow Reports

Query Tuning

- ✓ Check for optimal and efficient syntax
- ✓ Efficient use of query filters and parameters
- ✓ Verify there are no unused datasets
- ✓ Evaluate moving Group By, Order By, Calculations, etc. into the source query
- ✓ Ensure sorting & grouping is done only once
- ✓ Consider using more shared datasets, particularly if they can be shared (a shared dataset can be cached)
- ✓ Introduce aggregations or usage-based optimizations on the underlying data source

Troubleshooting Slow Reports

Report design

- ✓ Consider creating a separate drill-through report for additional details
- ✓ Look at the interactive page size (i.e., so a large amount of HTML isn't trying to render on page 1) and where page breaks are set
- ✓ Wrap a rectangle around objects like charts or indicators nested inside of a Tablix

Troubleshooting Slow Reports

Report delivery

- ✓ Deliver a cached copy of report if appropriate
- ✓ Deliver a snapshot copy of report if appropriate
- ✓ Different format possible? (PDF rendering is more CPU-intensive; Excel rendering is more memory intensive)
- ✓ Can the report be delivered via a subscription instead of on-demand rendering?
- ✓ Is SSRS the correct tool for returning a large dataset? (Perhaps another tool, such as SSIS, is more appropriate to export and deliver data)

Troubleshooting Slow Reports

System Configuration

- ✓ Make sure both the ReportServer and the ReportServerTempDB are optimized for high I/O
- ✓ Size ReportServerTempDB so it can handle peak volume times
- ✓ Investigate contention if running SSRS service on same server as the DB engine
- ✓ Look into adjusting some RSReportServer.config settings

MAINTENANCE & ADMINISTRATION

Keeping on top of everything...

Report Server Features to be Managed

- ✓ ReportServer health and backups
- ✓ ReportServerTempDB health (backups not required)
- ✓ Reporting Services Service
 - Report Manager (if native mode)
 - SharePoint Add-In (if integrated mode)
 - Report Viewer Web Part
 - Web Service which handles interactive requests
 - Background services which handle subscriptions, scheduled operations, TempDB maintenance, etc
- ✓ Shared schedules
- ✓ Alerts and data-driven subscriptions
- ✓ Encryption key backup and password
- ✓ Configuration file settings (ex: to handle memory pressure)
etc...

Report Server Security Considerations

- ✓ Service accounts
- ✓ System administrator roles
- ✓ Unattended execution account
- ✓ Stored credentials (subscriptions, caching, snapshots)
- ✓ User roles to allow report consumption and publishing
- ✓ Item level security and inheritance for document libraries, folders, reports, and data sources
- ✓ Implementation of row-level (data-level) security

The cross-reference between SSRS native mode roles and SharePoint groups is not a direct 1-1.

Types of Logging

Log	Description
Report Server Execution Log and the ExecutionLog3 View	The report server execution log contains data about specific reports, including when a report was run, who ran it, where it was delivered, and which rendering format was used. The execution log is stored in the report server database.
SharePoint trace log	For report servers running in SharePoint, the SharePoint trace logs contains Reporting Services information. You can also configure SSRS specific information for the SharePoint Unified Logging service. For more information, see Turn on Reporting Services events for the SharePoint trace log (ULS)
Report Server Service Trace Log	The service trace log contains very detailed information that is useful if you are debugging an application or investigating an issue or event.
Report Server HTTP Log	The HTTP log file contains a record of all HTTP requests and responses handled by the Report Server Web service and Report Manager.
Windows Application Log	The Microsoft Windows Application log contains information about report server events.
Windows Performance logs	The Windows Performance logs contain report server performance data. You can create performance logs, and then choose counters that determine which data to collect. For more information, see Monitoring Report Server Performance .
Setup log files	Log files are also created during Setup. If Setup fails or succeeds with warnings or other messages, you can examine the log files to troubleshoot the problem. For more information, see View and Read SQL Server Setup Log Files .
IIS Logs	Log files created by Microsoft Internet Information Services (IIS). For more information, see How to enable logging in Internet Information Services (IIS) (http://support.microsoft.com/kb/313437).

Execution Logs

- ✓ ExecutionLog3 view in the ReportServer DB

```
1
2 SELECT *
3 FROM dbo.ExecutionLog3
4 ORDER BY TimeStart DESC
5
```

100 %

Results Messages

	InstanceName	ItemPath	UserName	ExecutionId	RequestType	Format	Parameters
12	BIDEMD\@Sharepoint	/5856a109-85ed-441c-911f-8b369a865022)/Marketing...	CONTOSO\administrator	v4clfd55bywzhq3fakeuh3w	Interactive	RPL	Param_YearOfAward=2013
13	BIDEMD\@Sharepoint	/5856a109-85ed-441c-911f-8b369a865022)/Marketing...	CONTOSO\administrator	cuvzmt45544tjwzhvq2dgtiy	Interactive	NULL	Param_YearOfAward=2013&Param_TypeOfAward=Academy...
14	BIDEMD\@Sharepoint	/5856a109-85ed-441c-911f-8b369a865022)/Marketing...	CONTOSO\administrator	cuvzmt45544tjwzhvq2dgtiy	Interactive	RPL	Param_YearOfAward=2013&Param_TypeOfAward=Academy...

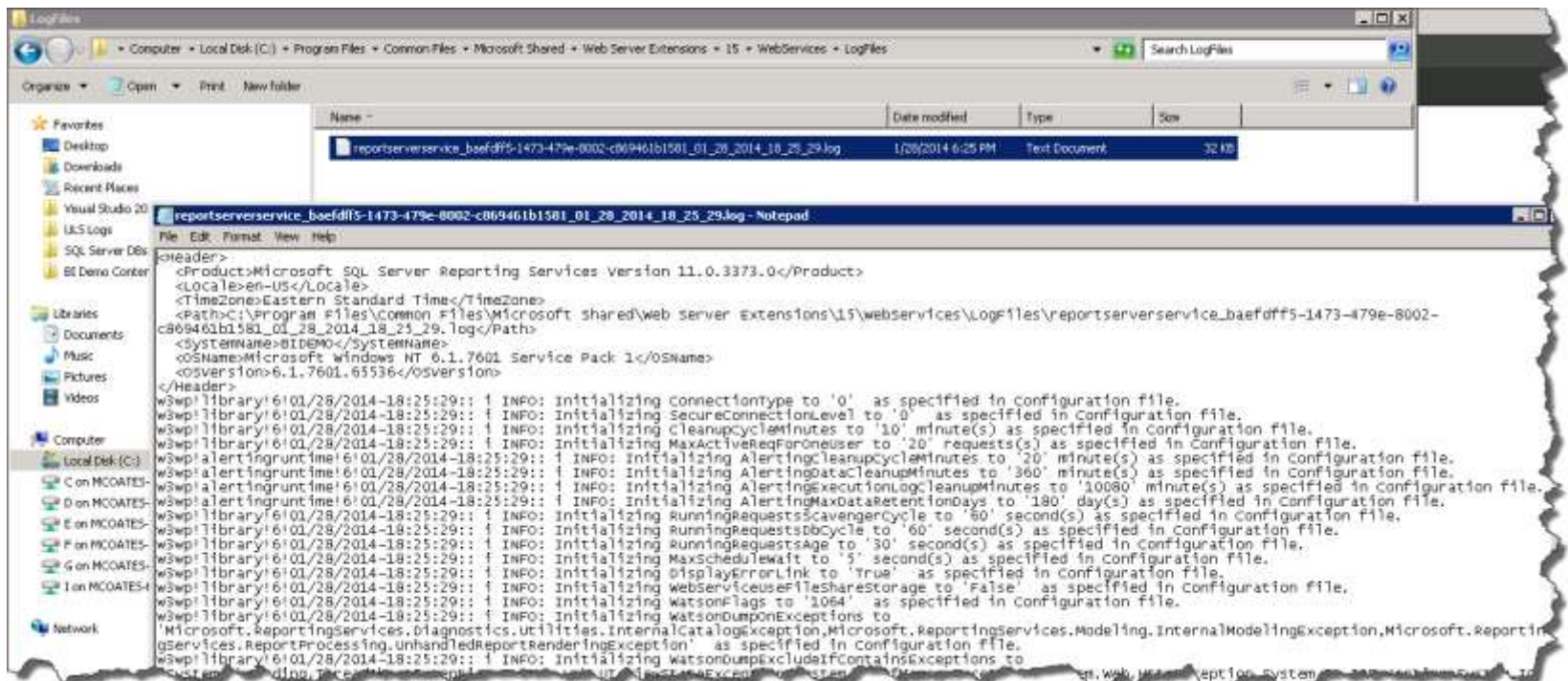
ItemAction	TimeStart	TimeEnd	TimeDataRetrieval	TimeProcessing	TimeRendering	Source	Status	ByteCount	RowCount	AdditionalInfo
Render	2013-11-30 12:50:07.097	2013-11-30 12:50:07.410	16	104	22	Live	rsSuccess	4044	36	AdditionalInfo <Proc
Toggle	2013-11-30 12:49:35.130	2013-11-30 12:49:35.147	0	0	0	Session	rsSuccess	0	0	NULL
Render	2013-11-30 12:49:17.930	2013-11-30 12:49:22.837	15	1221	3292	Live	rsSuccess	21014	81	AdditionalInfo <Proc

The execution log is very useful for finding most popular reports, most frequent users, commonly used parameter values, slow running reports, etc.

- ★ Best practice to export this data to another database for historical analysis. (Default retention is 60 days.)

Trace Logs

- ✓ Web Service: ReportServer_timestamp.log
- ✓ Windows Service: ReportServerService_timestamp.log



The trace logs are helpful to locate error messages & system diagnostics. How verbose these are can be configured.

Logging Retention Settings

Execution Log Data

ConfigurationInfo table

```
2 SELECT [ConfigInfoID]
3       ,[Name]
4       ,[Value]
5 FROM [dbo].[ConfigurationInfo]
6 GO
```

ConfigInfoID	Name	Value
98195E5C-D998-4FE5-A35E-2144F999C26A	EditSessionCacheLimit	5
2D1D2905-2991-4CB4-8A20-A816340AD43	EditSessionTimeout	7200
53343C61-0926-4FDF-9EE7-E50CC2C1F990	EnableClientPrinting	True
6A0BE719-CEA6-4670-8B9C-3E5E20849DC7	EnableExecutionLogging	True
35C1B5ED-2D17-44BD-A191-4E0B01762E23	EnableIntegratedSecurity	true
42612C8B-B6C5-4DB7-82F9-91184A77F06A	EnableLoadReportDefinition	True
95A7DECA-E24A-4EEA-A694-2957EA542B35	EnableMyReports	False
8E2B1B63-6831-4054-88DB-0CF4C7909051	EnableRemoteErrors	False
C5A3E0C4-6EAB-43B5-A94C-D126FB15B5B2	EnableReportDesignClientDownload	True
D884F53F-3B21-4140-8200-7A291B52F6FA	EnableTestConnectionDetailedErrors	True
7B64F38F-AF1B-4537-8422-4DEB32F82C39	ExecutionLogDaysKept	60
A5350E9F-A16C-4EE1-9DD9-F18E96060428	ExecutionLogLevel	Normal
A62BF184-9795-4911-8C81-63321AF82B44	ExternalImagesTimeout	600
E92A6E69-B538-4149-9C54-5083130012FC	MyReportsRole	My Reports
596593AD-758B-4F29-A6AB-20F0F46241C4	RDLXReportTimeout	1800
E49D8F5C-94B2-4ABA-A018-01D39F51AA85	ReportBuilderLaunchURL	
8D1FE1D7-37DC-4F14-96BE-D16839F32BCD	SessionTimeout	600
E088A4B5-4409-48B3-A282-CE29BC899EFC	SharePointIntegrated	True
6CE4524C-4798-4660-B8F1-A7A9C1116E54	SiteName	SQL Server Reporting Service
2B449361-4DDA-467B-83DF-2087271B9824	SnapshotCompression	SQL
B9EE28B6-E9AC-49A7-974E-B868560B145F	StoredParametersLifetime	180
3135CA54-EB6A-437C-9C26-0952B58BA6A0	StoredParametersThreshold	1500
57624D80-F9B9-41AC-8937-76B43C6B8912	SystemReportTimeout	1800
85B4F988-3D23-449A-B255-8CFFE588603F	SystemSnapshotLimit	-1

Trace Log Data

RSReportServer.config file

```
rsreportserver.config - Notepad
File Edit Format View Help

<Configuration>
  <Dsn />
  <ConnectionType>Default</ConnectionType>
  <LogonUser>
</LogonUser>
  <LogonDomain>
</LogonDomain>
  <LogonCred>
</LogonCred>
  <InstanceId>MSRS11.0@Sharepoint</InstanceId>
  <Add Key="SecureConnectionLevel" value="0" />
  <Add Key="CleanupCycleMinutes" value="10" />
  <Add Key="MaxActiveReqForOneUser" value="20" />
  <Add Key="AlertingCleanupCycleMinutes" value="20" />
  <Add Key="AlertingDataCleanupMinutes" value="360" />
  <Add Key="AlertingExecutionLogCleanupMinutes" value="10080" />
  <Add Key="AlertingMaxDataRetentionDays" value="180" />
  <Add Key="RunningRequestsScavengerCycle" value="60" />
  <Add Key="RunningRequestsDbCycle" value="60" />
  <Add Key="RunningRequestsAge" value="30" />
  <Add Key="MaxScheduleWait" value="5" />
  <Add Key="DisplayErrorLink" value="true" />
  <Add Key="WebServiceUserFileShareStorage" value="false" />
  <!-- <Add Key="ProcessTimeout" value="150" /> -->
  <!-- <Add Key="ProcessTimeoutGcExtension" value="30" /> -->
  <!-- <Add Key="watsonFlags" value="0x0430" /> full dump-->
  <!-- <Add Key="watsonFlags" value="0x0428" /> mindump -->
  <!-- <Add Key="watsonFlags" value="0x0002" /> no dump-->
  <Add Key="watsonFlags" value="0x0428" />
  <Add Key="watsonDumpOnExceptions"
Value="Microsoft.ReportingServices.Diagnostics.Utilities.InternalCatalog
rosoft.ReportingServices.ReportProcessing.UnhandledReportRenderingExcept
  <Add Key="watsonDumpExcludeIfContainsExceptions"
Value="System.Threading.ThreadAbortException,System.Web.UI.ViewStateEx
tion,System.IO.FileLoadException,Microsoft.SharePoint.SPException,Micr
  <RSTrace>
  <add name="FileName" value="ReportServerService" />
  <add name="FileSizeLimitMb" value="32" />
  <add name="KeepFilesForDays" value="14" />
  <add name="Prefix" value="tid,time" />
  <add name="TraceListeners" value="File" />
  <add name="TraceMode" value="unique" />
```

Questions? Comments?

The Lifecycle of a Reporting Services Report

Requirements & Templates



Development Standardization & Centralization



Testing & Documentation



Report Delivery



Deployment



Troubleshooting



Maintenance & Administration

Thanks for attending!

The Lifecycle of a Reporting Services Report

Slides at
sqlchick.com



(Presentations & Downloads page)

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